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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 09/700,367
Filing Date: November 15, 2000
Appellant(s): KARER ET AL.

Michael Byrne
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 2/26/2008 appealing from the Office action mailed 8/9/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 1-4, 6-8, and 10-23 do not stand rejected because 11-15 have been withdrawn.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,413,477	Govoni et al.	7-2002
2,636,712	Lubbock	4-1950

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 1, 3, 4, 6, 10, 16, 18-20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Govoni et al. (6,413,477).

With respect to claims 1, 3, 4, 16, 18, and 19, Govoni et al. discloses an apparatus comprising:

a reactor chamber (20) in the form of a vertical cylinder (col. 10, lines 47-48); wherein the reactor chamber (20) can have larger diameter at is upper end (col. 11, lines 25-28) which would thus inherently form a calming zone;

a recycle (circulation) line (36) with a compressor (26) and cooling device (27) within the line (36);

wherein there is a single gas distributor plate (33) within the reactor (see figure 2) to shape flow homogenously to the reaction bed;

and wherein there is no internal heat exchanger within the reactor (see figure 2 and 3 and col. 12, lines 20-21).

Govoni et al. fails to disclose any particulars with regard to the amount of open space provided to the gas distribution grid (33). It has been held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); In Gardnerv. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). Also see MPEP 2144.

With respect to claims 6 and 20, Govoni et al. fails to disclose any particulars with regard to the dimensions of the reactor, but does disclose wherein it can have a high aspect ration (height/diameter ratio) (col. 7, lines 28-30). It has been held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device. In re Rose, 220 F.2d 459, 105

USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). Also see MPEP 2144.

With respect to claims 10 and 23, Govoni et al. discloses wherein there is a cyclone solid/gas separator (22, col. 6, lines 27-32 and col. 10, line 52) between the reactor (20) and the compressor (26) and cooling device (27) of the line (36).

2. Claims 7, 8, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Govoni et al. (6,413,477), as applied to claim 1, and further in view of Lubbock (2,636,712).

With respect to claim 7, 8, 21, and 22, Govoni et al. fails to disclose a closable flap with holes at the region of transition (where the circulation inlet 65 enters the reactor).

Lubbock teaches a slide valve (equivalent to a flap) with orifices (col. 2, lines 18-28) used to control the flow of solids in suspension (col. 1, lines 1-6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the slide valve of Lubbock in the area where the circulation gas inlet (65) and the reactor (60) connect in order to control the amount of particles which would fall through the grid and into the circulation line.

With further respect to claims 8 and 22, Lubbock fails to disclose a specific size range for the orifices but Lubbock does disclose that the sizes of the orifices are variable (col. 2, lines 18-28). Accordingly, one of ordinary skill in the art at the time the

invention was made would have optimized, by routine experimentation, the orifice sizes necessary to obtain desired operational conditions (In re Boesch, 617 F.2d. 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

(10) Response to Argument

A. Appellants mainly argue the following:

1. On page 8 of the Appeal Brief, Appellants argue: "…Appellants respectfully submit, however, that the claims, the specification, and the figures all make clear that in order to fall with the scope of the present invention a single reactor must be utilized for polymerizing ethylenically unsaturated monomers.

On the other hand, the Govoni et al. reference discloses a "process for the gas-phase polymerization of olefins carried out in two interconnected polymerization zones ....

The Examiner has never argued that it would have been obvious to modify the reference such that the polymerization takes place in a single reactor chamber, as required by the present claims... Instead, the Examiner has argued that "the claim uses "comprising" which is open transitional language and does not exclude a reference from having more elements than those recited in the instant claims." As discussed above, this argument is not in line with relevant case law…."

2. On page 10 of the Appeal Brief, Appellants argue: "…Appellants respectfully submit that a person having ordinary skill in the art would understand that section 3 of Fig. 1 corresponds to lines 21 of Fig. 2, or to line 71 of Fig. 3. According to Govoni et al. lines 3, 21 and 71 are not gas circulation lines, but are polymerization zone interconnecting lines adapted to facilitate discharge of polymer from the first reactor to the separator. A skilled artisan would not have confused these lines with the gas recycle lines (6, 36, and 81).

Examiner respectfully disagrees. The apparatus of Govoni reads on the instant claims wherein the return line in the apparatus of Govoni et al. (fig. 3, 71)

is connected to a separator (72) and reactor (70) combination in the same way the return line (fig. 2, 3) of the instant application is connected to the cyclone separator (3a) as claimed, the only difference apparatus wise is that in the instant specification appellant does not disclose how those separated particles are further processed whereas the Govoni reference provides additional structural details in this regards. Govoni's apparatus refers to line (71) as a line connecting the upper regions of the two reactors (col. 12, lines 4-21); additionally, as illustrated in Govoni's fig. 3, line (71) comprises also the only outlet passage of the gas and solid exiting the reactor (60) where the gas continues from thereon to line (36). Therefore, the apparatus of Govoni comprises the reactor and return line as claimed in the details set forth in the Final Office Action and is capable of functioning as in the instant claims without the need to contemplate removing the second reactor.

Furthermore, the claims use "comprising" which is open transitional language and does not exclude a reference from having more elements than those recited in the instant claims. MPEP 2111.03 [R-3]. Therefore, the reference can include more than what is contained in the claim language. Hence, the Examiner has respectfully established a *prima facie* case of obviousness.

B. Appellants present arguments regarding claim 16 regarding claim language which includes:

> "… said reactor chamber consisting essentially of a region of transition in the lower section of the tube followed by a reaction zone, which is followed by a

calming zone in the upper section of the tube…"Thus, the Examiner has already characterized at least the frustoconical section as being part of the first reactor. Otherwise, the Examiner could not have argued that the addition of a slide valve "in the area where the circulation gas inlet (65) and the reactor (6) connects meets the claim limitation that a closable flap is situated in the region of transition.

….appellant further argues on page 12 of the Appeal Brief "...Thus, if the Examiner's proposed modifications were made, the first reactor would not consist essentially of a region of transition in the lower section of the tube, followed by a reaction zone, which is followed by a calming zone in the upper section of the tube."

Examiner respectfully disagrees. Govoni explicitly teaches that the reactor (60) is comprised of a base comprised of the frustoconical section (62), therefore, section (62) is equivalent to the region of transition claimed in the instant application.

B. Appellants further argue on page 13 of the Appeal Brief the following:

"... Of course, since claims 4 and 19 are dependent from claims 1 and 16, respectively, they include the limitation that the region of transition is designed such that either no gas distributor plate is present, or such that only a gas distributor plate is present which has a total surface area and has gas orifices, and wherein said gas orifices occupy more than 50% of the total surface area of said gas distributor plate. Appellants respectfully submit, therefore, that the present rejection does not address all of the features required by claims 4 and 19.

Examiner respectfully disagrees. As set forth in the Final Office Action mailed on 8/9/2007 on page 3, the last paragraph, and as set forth in section 9 above; Figure 2 illustrates wherein the reactor has a gas distributor plate (33). Govoni et al. fails to disclose any particulars with regard to the amount of open space provided to the gas distribution grid (33). It has been held that where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed

device was not patentably distinct from the prior art device. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); In Gardnerv. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). Also see MPEP 2144.

C. In response to appellant's argument that the examiner's conclusion of obviousness regarding claims 7-8 and 21-22 rejection is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

D. Appellants further argue on page 14 that the rejection of claims 8 and 22 is in error:

> "…The Examiner has not identified any recognized result that a skilled artisan would have associated with the diameter of uniformly distributed holes on a closable flap situated in the region of transition of a reactor according to the present claims. Thus, the present rejection is in error and should be withdrawn."

Examiner respectfully disagrees. As set forth in section 9 above, Lubbock fails to disclose a specific size range for the orifices but Lubbock does disclose that the sizes of the orifices are variable (col. 2, lines 18-28). Accordingly, one of

ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the orifice sizes necessary to obtain desired operational conditions (In re Boesch, 617 F.2d. 272,205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/KAITY V. HANDAL/

Examiner, Art Unit 1795

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